Austria

AUSTRIAN NATIONAL REPORT

under the

CONVENTION ON NUCLEAR SAFETY

September 2004

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INTRODUCTION

1. About this report

The Austrian National Report for the CNS Conference 2005 has been updated on the basis of the last National Report comprising all recent changes of the legislative and regulatory framework. Due to the need to implement the recent EU directives in the field of radiation protection into national legislation Austria has amended the Act on Radiation Protection in a first step in 2002. Those provisions that still might lack full implementation will be put into national law in a second step by the amendment of both the Radiation Protection Ordinance and the Radiation Protection Act in 2005 at the latest.

The form of this report has been slightly rearranged in order to better follow the structure given in the guidelines.

2. General outline of Austria's national policy on nuclear safety

Austria has never operated a nuclear power plant and has no intention to do so in the future. Thus, Austria's high interest in the safety of nuclear facilities, except for the domestic nuclear activities as described in chapter 7.4., relates primarily to environmental and health concerns arising from the operation of nuclear power plants in Austria's neighbourhood.

Already in 1978, the Austrian electorate decided in a referendum not to start the operation of the nuclear power plant in Zwentendorf. Shortly thereafter, on 15 December 1978, the Austrian parliament promulgated the Law on the Prohibition of the Use of Nuclear Fission for Energy Generation in Austria [BGBl.[1] No. 676/1978: Bundesgesetz über das Verbot der Nutzung der Kernspaltung für die Energieversorgung in Österreich]. This position was strengthened by the Chernobyl accident in 1986 which substantially increased the opposition of the political parties and the public at large against nuclear power. Austria was at the time among those countries in Central Europe which were most affected by the Chernobyl accident.

In 1999, the Austrian parliament passed unanimously the Constitutional Law on a Nuclear-free Austria [BGBl. I No. 149/1999: Bundesverfassungsgesetz für ein atomfreies Österreich]. It stipulates, inter alia, that installations which serve for energy generation by nuclear power must not be constructed or, if they already exist, come on line. Furthermore, the law prohibits the transport of fissile materials for purposes of nuclear power generation or disposal unless this conflicts with international obligations.

In view of the high risks emanating from nuclear installations, especially from nuclear power plants, Austria attaches utmost importance to international efforts to harmonise and steadily increase nuclear safety on an international level. Consequently, Austria has undertaken a number of bilateral activities with neighbouring countries with regard to the exchange of information on nuclear safety matters. It does not only comprise operational information on nuclear installations but also early warning schemes in the case of nuclear incidents or accidents and mutual assistance for the prevention or mitigation of effects from such radiological events.

Austria has contributed and will contribute to all international activities which aim at improving safety levels worldwide. In this respect, Austria regards the Convention on Nuclear Safety a very important tool in developing a global nuclear safety culture. Its regular Review Meetings provide a highly welcome opportunity to review progress in the Member States of the Convention and to exchange views on how best to implement its provisions.

[1] Bundesgesetzblatt = Federal Law Gazette

ARTICLE BY ARTICLE REVIEW

Obligations

General provisions

Article 6 (Existing Nuclear Installations)

not applicable

Nuclear Installations in the broader sense (not as defined in Art. 2 of the Convention)

Currently, Austria operates no nuclear installations as defined in Article 2 of the Convention. Only three „nuclear facilities", i.e. nuclear installations in the broader sense, are operated: two research reactors and one central waste processing and interim storage facility; they are described below.

In the 1970s, a nuclear power plant was constructed in Zwentendorf, but as the consequence of the negative vote in the referendum in 1978 was subsequently not put into operation. All nuclear fuel elements were removed in the late 1980s.

The ASTRA research reactor at the Austrian Research Centre Seibersdorf, finally shut down in 1999, has entered the phase of decommissioning in time. After the removal of all the spent fuel and the return shipment of to the United States for final storage in 2001, the environmental impact assessment and the necessary licensing procedures have been successfully completed.

6.1 Atominstitut Vienna (Atomic Institute)

The Atominstitut of the Austrian Universities which is administered by the Technical University Vienna operates a TRIGA Mark II research reactor. It has a maximum steady state thermal output of 250 kW and pulsing capabilities up to 250 MW. In operation since March 1962, the reactor has been used exclusively for basic and applied academic research and teaching purposes. Being the closest research reactor to the IAEA headquarters it is also frequently used by IAEA staff for development and calibration of safeguards instruments. The total number of fuel elements in the core is presently 81 (plus 3 fuel elements in the in-pool storage racks), the estimated total activity of these fuel elements after 1 year of cooling time is 2.85×10^{15} and after 10 years approx. 1.81×10^{14} Bq. The Atominstitut has a total spent fuel storage capacity of 168 fuel elements.

6.2 Reaktorinstitut Graz (Reactor Institute)

The Graz Reactor Institute has been operating a nominal 10 kW Siemens ARGONAUT reactor since 1965. The fuel enrichment levels are 20% and 90%. The reactor is mainly used for training purposes within the framework of Graz Universities' education programme. The final shutdown of the Graz Reactor is scheduled for 2006 at the latest. Currently there are planning activities on the decommissioning and return shipment of the fuel elements to the USA.

6.3 Interim Storage Facility for Low-Level Radioactive Waste Seibersdorf

This waste storage facility together with related waste treatment facilities is operated by the Nuclear Engineering Seibersdorf, affiliated company of Austrian Research Centres, in order to collect and treat low and medium level waste (L/MLW) from hospitals, industry and research laboratories (currently 30-40 tons/year).

In the treatment facilities suitable equipment, e.g. incinerator, supercompactor and waste water evaporator is used to process and condition low and medium level waste. As a conditioning process, cementing is predominantly used.

The storage facility has currently a design capacity of 15.000 barrels of 200 litres each of conditioned waste. The building of the ASTRA research reactor at the Austrian Research Centre Seibersdorf, which is currently under decommissioning, is planned to be used as an additional storage facility after successful clearance.

On the basis of a recently renewed joint agreement between the Republic of Austria, the community of Seibersdorf and the Nuclear Engineering Seibersdorf, the intermediate storage facility is scheduled to be operated until 2030 on the site of the research centre.

Legislation and regulation

Article 7 (Legislative and Regulatory Framework)

Nuclear security comprises the legal areas of radiation protection, installation safety, safeguards and physical protection of nuclear material and nuclear facilities. As Austria constitutes a Federal State, a number of federal (Bund), regional (Länder) and provincial (Bezirksverwaltungsbehörden) authorities are involved in the regulation of these matters.

7.1 Law Prohibiting the Use of Nuclear Fission for Energy Purposes, Constitutional Law on a Nuclear-free Austria

As outlined in the Introduction, the use of nuclear energy for peaceful purposes in Austria has been significantly influenced by the passing of the Law Prohibiting the Use of Nuclear Fission for Energy Purposes in 1978 and of the Constitutional Law on a Nuclear-free Austria in 1999.

The Constitutional Law on a Nuclear-free Austria prohibits the construction and putting into service of installations for the production of energy by means of nuclear fission as well as – with some exemptions – the transport of fissile materials in Austria. Where an international obligation exists, the international obligation would prevail. The use of installations for research and development activities is compatible with the quoted constitutional law.

7.2 General Administrative Procedures Act

Beyond specific provisions for licensing as referred to in specific laws the General Administrative Procedures Act [BGBl. No. 51/1991: Allgemeines Verwaltungsverfahrensgesetz] applies.

7.3 Radiation Protection Act

The Radiation Protection Act of June 11th, 1969 [BGBl. No. 227/1969: Strahlenschutzgesetz, amended in 2002 taking into account recent EU legislation] and the three Radiation Protection Ordinances, which will replace in 2005 the Radiation Protection Ordinance [BGBl. No. 47/1972: Strahlenschutzverordnung], contain detailed provisions concerning radiation protection, installation safety and the handling of radioactive waste.

The recent amendment of the Radiation Protection Act by the Radiation Protection-EU-Adaptation Act [BGBl. I No. 146/2002: Strahlenschutz-EU-Anpassungsgesetz] in August 2002 aimed at the completion of the transformation of the following EU-directives into national law:

- EU Council Directive 96/29/EURATOM of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation (OJ No. L 159 of 29 June 1996),
- EU Council Directive 97/43/EURATOM of 30 June 1997 on health protection of individuals against the dangers of ionizing radiation in relation to medical exposure, and repealing Directive 86/466/Euratom (OJ No. L 180 of 9 July 1997),
- EU Council Directive 90/641/EURATOM of 4 December 1990 on the operational protection of outside workers exposed to the risk of ionizing radiation during their activities in controlled areas (OJ No. L 349/21 of 13 December 1990).

Moreover, with the ratification of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management [BGBl. III No. 169/2001], Austria was obliged to enter further obligations into national law.

Although the existing national legislation on radiation protection is in line with the latest EU standards, some provisions of the Basic Safety Standards Directive 96/29/EURATOM, especially those on interventions, will be implemented by another amendment of the Radiation Protection Act by the end of 2004. This amendment will also translate the EU Council Directive 2003/122/EURATOM of 22 December 2003 on the Control of High Activity Sealed Sources and Orphan Radioactive Sources, OJ No. L 346 of 31.12.2003.

Furthermore the amendment will provide for better controls (registration) of radioactive material. Following the amendment of the Radiation Protection Act the following Ordinances will be enacted in 2005:

- General Radiation Protection Ordinance (replacing the Radiation Protection Ordinance 1972),
- Radiation Protection Ordinance for Applications in Medicine,
- Ordinance for Interventions in case of Radiological Emergency,
- Ordinance for Naturally Occurring Radioactive Material,

7.4 Radioactive Substances, Nuclear Fuels and Radiation Emitting Devices

According to the Radiation Protection Act any handling of radioactive material or use of any other radiation emitting devices needs licensing, if legally binding exemption levels are exceeded. *Handling of radioactive material* means the extraction, production, storage, carriage, delivery, supply, import, export, processing, use or disposal of radioactive material or any other activity resulting in the emission of radiation.

The amendment to the Radiation Protection Act, which came into force with beginning of year 2003, demands the introduction of a register for radioactive sources which exceed the exemption levels. This register will help the competent authorities to control the existing radioactive substances.

Specific requirements in regulations foresee exemptions from licensing for activities involving radioactive materials, if they entail no radiation hazards. Similar exemptions relate to the carriage of radioactive materials, provided it complies with the appropriate transport regulations, and also to installations used for military research and experimental purposes.

The design of devices containing radioactive materials or of radiation-emitting equipment may be approved by the authority in accordance with strict legal requirements. Such an approval may simplify the licensing procedures.

The possession of radioactive materials or of radiation-emitting equipment which is exempt from licensing under the Radiation Protection Act has to be reported. There are exemptions from the requirement to report, e.g. in case that radioactive material is below given limits of activity, or for the transport of radioactive materials when it is in compliance with the relevant transport regulations.

With the amendment of the Radiation Protection Act in 2002 new exemption levels and dose limits have been introduced in adoption of the EU Council Directive 96/29/EURATOM.

7.5 Regulation of Radioactive Waste Management

The Radiation Protection Ordinance contains detailed provisions concerning the handling of radioactive waste, which mainly relate to radiation protection measures. According to the current draft modifying the Radiation Protection Ordinance, the licensing of such installations requires both the applicants for new licenses and the operators of existing installations to furnish waste management schemes.

Since Austria does not operate nuclear power plants, there is no major production of high level radioactive waste (HLW). Consequently, there is no need for considering intermediate or final storage capacities in Austria for HLW. The relatively small quantities of HLW resulting from the Austrian research reactors are covered by a framework contract for „US-origin nuclear fuel“.

The Ordinance on the Shipment of Radioactive Wastes [BGBl. II No. 44/1997: Radioaktive Abfälle-Verbringungsverordnung], relates to the supervision and control of shipments of radioactive waste into, out of and through the national territory. It was issued pursuant to the Radiation Protection Act in order to implement the provisions of EU Council Directive 92/3/EURATOM of 3 February 1992 on the supervision and control of shipments of radioactive waste between Member States and into and out of the Community. The Annexes to the Ordinance define, inter alia, the form of the applicable standard documentation and the list of quantities and concentration levels for radioactive waste.

7.6 Nuclear Non-proliferation

Austria has been a Party to the Non-proliferation of Nuclear Weapons (NPT) since 1970 [BGBl. No. 258/1970]. The legal basis for Austria’s non-proliferation policy was established through the Austrian Nuclear Non-proliferation Act of 1972, revised in 1991.

The authority responsible for nuclear non-proliferation is the Federal Minister for Economy and Labour.

In accordance with Article III.1 of the NPT, Austria concluded a Comprehensive Safeguards Agreement with the IAEA on 21 September 1971. Following the Austrian accession to the European Union, the bilateral safeguards agreement with the IAEA was suspended, and Austria became a party to the trilateral agreement between the IAEA, EURATOM and the non-nuclear weapon States Members of EURATOM. On 30 April 2004, the Additional Protocol to the Safeguards Agreement entered into force.

Under Part 4 of the Nuclear Non-proliferation Act and in compliance with Austria's international obligations under the NPT, the export of nuclear materials and non-nuclear materials as well as nuclear equipment is subject to a license which is granted by the Federal Ministry for Economy and Labour (Bundesministerium für Wirtschaft und Arbeit) in accordance with the provisions of the NPT.

With regard to the physical protection of nuclear material, Part 3 of the Nuclear Non-proliferation Act contains provisions on interference or encroachment by unauthorised third

parties. The Federal Ministry of the Interior (Bundesministerium für Inneres) may impose any measures it considers necessary to ensure the protection of nuclear materials at the domestic level. The Ministry of the Interior is responsible for issuing licenses and for the adoption of security measures in connection with the handling of nuclear materials, including protective measures against interference or encroachment. Before decisions are taken, the Federal Ministry for Economy and Labour (Division for Nuclear Non-proliferation) and the Federal Ministry of Agriculture, Forestry, Environment and Water Management (Division for Radiation Protection) shall be consulted. In addition, the Federal Ministry of the Interior decides on protective measures with regard to the carriage of materials that come within the purview of the Act on the Transport of Dangerous Goods by Road.

Physical protection levels are based on the IAEA Guidelines and Recommendations for the Physical Protection of Nuclear Materials as published in IAEA document INFCIRC/225 as revised.

Since illicit trafficking has become an issue of international political as well as technical concern, Austria has been participating in the reporting system of the IAEA illicit trafficking database and other relevant activities in the framework of this organisation. The Federal Ministry for Economy and Labour (Division for Nuclear Non-proliferation) serves as contact point to the international system and as national co-ordinator between relevant authorities on Federal and Regional level.

7.7 Act on Mineral Raw Materials

Under the Act on Mineral Raw Materials of 1999 [BGBl. I No. 38/1999: Mineralrohstoffgesetz], ores containing uranium or thorium are in the property of the State (Bund). Only the Bund has the right of prospecting for and mining them. The Bund may abandon for value the exercise of these rights in specified territories through civil legal contracts to physical or legal persons or business partnerships who have the technical and financial means necessary to open and operate a mine. The Federal Minister for Economy and Labour concludes such contracts subject to the agreement of the Federal Minister for Finance.

7.8 Regulation of Transport

In Austria, the transport of radioactive materials is strictly controlled so as to ensure maximum safety. Safety measures of a general nature are laid down in the Radiation Protection Act. The regulation of the import, export and passage in transit has been introduced with the recent amendment; details are to be laid down in the respective ordinance.

The transport of radioactive materials by rail is governed by the provisions of the Regulation Concerning the International Carriage of Dangerous Goods by Rail (RID), an Annex to the Convention Concerning the International Carriage by Rail (COTIF). RID has been applicable to the international transport of dangerous goods in Austria since it became a Party to COTIF. Under the Act on the Carriage of Dangerous Goods[2] of 1998 (GGBG), it also applies to transport operations within Austria.

The international transport of radioactive materials by road is primarily subject to the ”European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR)”. The provisions of ADR apply directly. In addition to ADR, there are provisions of the GGBG which refer to, implement and complete the ADR. Under the GGBG, ADR is also applicable to the domestic carriage of dangerous goods by road in Austria.

[2] Bundesgesetz über die Beförderung gefährlicher Güter und über eine Änderung des Kraftfahrtgesetzes 1967 und der Straßenverkehrsordnung 1960 (Gefahrgutbeförderungsgesetz -GGBG), BGBl. I No. 145/1998 idgF

The GGBG also implements several directives of the European Union concerning the carriage of dangerous goods by road, rail and inland navigation, which also refer to, implement and complete the international agreements mentioned above.

As regards air transport, the provisions of the ICAO-Technical Instructions for the Safe Transport of Dangerous Goods by Air are implemented by the GGBG. Furthermore, the Dangerous Goods Regulations of the International Air Transport Association (IATA) constitute an integral part of any carriage contract concluded by an IATA-carrier.

Since the relevant international legal instrument for the transport of dangerous goods by inland navigation (ADN) has not yet entered into effect, the transport of radioactive materials is subject to the provisions of an ordinance[3] based on the 1997 Federal Act on Inland Navigation[4] and to the provisions of the GGBG, as far as they are common to all modes of transport.

Regardless of the applicable law of the state in which a harbour is located, the transport of radioactive materials by sea ships registered in Austria has to comply with the International Maritime Organisation (IMO) Dangerous Goods Code. The provisions of this IMDG-Code are also referred to in the GGBG.

The GGBG also implements several directives of the European Union concerning the carriage of dangerous goods by road, rail and inland navigation, which also refer to, implement and complete the international agreements mentioned above.

As far as the international legal instruments mentioned in this item 7.10. (RID/COTIF, ADR, ICAO-TI, IATA-DGR, ADN, IMDG-Code) relate to the transport of radioactive materials, they are mainly based on provisions published by the IAEA (Safety Series No. 6, ST-1 und ST-2).

7.9 The licensing system and the inspection, assessment and enforcement process governing the safety of nuclear installations

As a result of Austria's federal structure, the licensing procedures involve federal (Bund) as well as regional (Länder) authorities. Under the Radiation Protection Act the responsibility for licensing is shared between the Federal Minister of Agriculture, Forestry, Environment and Water Management (Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft) and other federal and provincial authorities. The distribution of responsibilities is specified in Article 41 of this Act.

The construction and operation of installations for the handling of radioactive materials and radiation emitting devices require a license according to the Articles 5 to 7 of the Radiation Protection Act. The Radiation Protection Ordinance contains further provisions for the licensing procedure. The licensing procedure is also subject to the provisions of the General Administrative Procedures Act.

According to Article 5 of the Radiation Protection Act the design of installations with higher potential risk needs to be licensed prior to the start of the construction in order to save costs and facilitate the subsequent licensing procedure. According to Article 6 an operating license is granted if the installation has been constructed in compliance with the specified conditions and obligations, if a radiation protection officer has been appointed and if the regular operation of the installation entails no hazard from ionising radiation. A license further needs safety assessment, final safety analyses and a concept for emergency preparedness. Article 7 rules the licensing procedure for facilities with a lower potential risk. A concept for decommission-

[3] Verordnung des Bundesministers für Wissenschaft und Verkehr über die Beförderung gefährlicher Güter auf Wasserstraßen (ADN -Verordnung), BGBl. II No. 295/1997 idgF

[4] Bundesgesetz über die Binnenschiffahrt (Schiffahrtsgesetz), BGBl. I No. 62/1997 idgF

ing and dismantling, a concept for the recycling or reuse of radioactive substances and the management of radioactive waste are obligatory for any installation.

The operation of all installations licensed under this law is inspected regularly by the licensing authority according to Article 17 in order to assure that the facility keeps the state of the art. In case of endangerment of the human health and life and if the requirements of the license are not observed the competent authority may prohibit the further operation.

According to Article 18 of the Radiation Protection Act, in case of imminent danger from an installation, the authorities have to take all appropriate measures to avert the danger. They may issue promptly enforceable provisional injunctions and, after consulting the radiation protection officer of the installation, have to proceed in compliance with Article 4 of the 1950 Act on the Enforcement of Administration Decisions [BGBl. No. 53/1991: Verwaltungsvollstreckungsgesetz].

Any malfeasance or breach of these provisions is fined according to Article 39.

Article 8 (Regulatory Body)

Regulatory and Supervisory Authorities

In Austria, legislative and executive powers are divided between the Bund and the Länder. Under the general clause of Art. 15 of the Federal Constitutional Law, legislative and executive powers are vested in the Länder, with the exception of all matters which are explicitly listed in Art. 10 to 12 of the Federal Constitutional Law.

8.1 Federal Authorities (Bund)

The Federal Ministers are responsible for the application of the pertinent provisions of the Radiation Protection Act with regard to:

- nuclear reactors;
- production of nuclear fuels or processing of irradiated nuclear fuels;
- particle accelerators;
- design approval for special equipment with radiation sources which can replace a license;
- approval of medical practitioners and hospitals.

8.1.1. The Federal Ministry of Agriculture, Forestry, Environment and Water Management

(Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft)

The Federal Ministry of Agriculture, Forestry, Environment and Water Management is responsible for radiation protection, with the exception of radiation matters in the medical field and foodstuff. The Minister is also responsible for issues relating to the long-term storage of radioactive waste, including the siting, construction and operation of storage facilities. The decision on a specific repository site shall take account of the requirements of the 1993 Environmental Impact Assessment Act [BGBl. No. 697/1993: Umweltverträglichkeitsprüfungsgesetz] and of the procedure laid down in the land use laws of the Länder [1972 Radiation Protection Ordinance]. Finally, the Federal Ministry of Agriculture, Forestry, Environment and Water Management is responsible for general affairs of nuclear co-ordination.

8.1.2 The Federal Ministry for Economy and Labour

(Bundesministerium für Wirtschaft und Arbeit)

In his capacity as the National Nuclear Non-proliferation Authority, the Federal Minister for Economy and Labour is responsible for nuclear material accountancy and control in accordance with the Non-proliferation Act of 1991. Under the same Act, he is furthermore responsible for export controls regarding fissile material, non-nuclear material (e.g. heavy water, zirconium, etc.) and equipment.

Under the 1995 Foreign Trade Act [BGBl. No. 172/1995: Außenhandelsgesetz], he is responsible for the licensing of exports of nuclear-related „dual use„ goods. In addition, the Minister is responsible for a limited number of matters concerning the safety of nuclear installations, e.g. pressure vessels and power engines. Finally, the Central Labour Inspectorate of the Federal Ministry for Economy and Labour is responsible for the protection of the health of employees carrying out radiation activities.

8.1.3 The Federal Ministry of Education, Science and Culture

(Bundesministerium für Bildung, Wissenschaft und Kultur)

The Federal Ministry of Education, Science and Culture is responsible for the co-ordination and strategic orientation of energy research and development in general and nuclear research in particular. In addition, it is the competent authority for the licensing of the construction and operation as well as for the inspection of university-based nuclear installations in cooperation with the Federal Ministry of Agriculture, Forestry, Environment and Water Management.

8.1.4 The Federal Ministry of Finance

(Bundesministerium für Finanzen)

As far as nuclear third party liability is concerned, the Federal Ministry of Finance supervises the conditions of liability insurances.

8.1.5 The Federal Ministry for Foreign Affairs

(Bundesministerium für auswärtige Angelegenheiten)

The Federal Ministry for Foreign Affairs is the competent authority representing Austria in international fora. In particular, it is in charge of all issues related to the negotiation and implementation of all legal instruments concluded with the IAEA.

8.1.6 The Federal Ministry of Health and Women

(Bundesministerium für Gesundheit und Frauen)

The Federal Ministry of Health and Women is responsible for radiation matters in the medical field and with regard to foodstuffs.

8.1.7 The Federal Ministry of the Interior

(Bundesministerium für Inneres)

The Federal Ministry of the Interior is responsible for issuing licenses on the physical protection of nuclear material and facilities in use, storage and transport, including protective measures against interference or encroachment by unauthorised third persons [Safeguards Act, Part 3]. Moreover it is responsible for the coordination of the national crisis management system

8.1.8 The Federal Ministry of Justice

(Bundesministerium für Justiz)

The Federal Ministry of Justice is responsible for all legal matters relating to the Act on Liability for Damage caused by Radioactivity.

8.1.9 The Federal Ministry for Transport, Innovation and Technology

(Bundesministerium für Verkehr, Innovation und Technologie)

The Federal Ministry for Transport, Innovation and Technology is the authority competent for the carriage of dangerous goods (including radioactive materials) by all means of transport, for the shipments of radioactive materials and the transport security measures with regard to a radiologically significant carriage of nuclear materials (Act on the Transport of Dangerous Goods by Road, in line with respective international agreements such as e.g. ADR). In this regard it is also responsible for the approval of packages and shipments of radioactive materials. This Ministry is the competent authority for the implementation and interpretation of IAEA's regulations for the safe transport of radioactive materials (IAEA Safety Series Nos. 6, 7 and 37 as amended by IAEA Doc. ST-1 and ST-2) as well as for the legislation enforcing these regulations.

8.2 District Authorities

(Bezirksverwaltungsbehörden)

In general, the district authorities are responsible for the implementation of Parts I - III of the Radiation Protection Act, except where the Law explicitly provides that the Federal Ministry or the regional Governor are in charge.

Under the Constitution, responsibility for granting construction licenses for installations to handle radioactive materials would normally lie with the mayor of the town to which the site of the installation belongs. In practice, however, advantage is usually taken of the possibility of transferring this responsibility to the regional authorities' level.

With the recent amendment of the Administrative Reform Act [BGBl. I No. 65/2002] the Independent Administration Senate (Unabhängiger Verwaltungssenat) has been introduced on the Countries' level as the competent appeal court in regarding administrative decisions.

Article 9 (Responsibility of the license holder)

Each work activity with radioactive material exceeding the exemption limits in Austria needs a license. The license holder must fulfil specific requirements, conditions and obligations laid down in connection with the operating license. They are responsible for any breach towards the authority.

Nuclear Third Party Liability

The liability for nuclear installations and nuclear substances, previously governed by the Act on Liability for Nuclear Damage of 1964, has been completely reformed by the Act on Liability for Damage Caused by Radioactivity[5] of 1999. The Act on Liability for Nuclear Damage of 1964 still followed the pattern of the Paris Convention, which Austria has signed, but not ratified. Its liability regime for nuclear damage was felt to be inadequate in view of the modern requirements. Thus the Act on Liability for Damage Caused by Radioactivity of 1999

[5] Bundesgesetz über die zivilrechtliche Haftung für Schaden durch Radioaktivität (Atomhaftungsgesetz 1999 – AtomHG 1999, BGBl. I No. 170/1998)

aims at creating an up-to-date regulation, which comes up to the standard of comparable Austrian acts on strict liability.

The Act covers any damage to persons or property resulting from ionizing radiation through nuclear installations, nuclear substances and radionuclides. Further coverable damages are the costs of the removal of impairments to the environment and the costs of preventing measures undertaken to avert immediate danger originating from nuclear installations, nuclear substances or radionuclides. In this context, impairment to the environment is defined as any interference with the environment, which lastingly alters the latter in such a way that it differs noticeably from natural processes either in quantity, in quality or in the temporal respect. Only the impairment which is of some significance is to be compensated.

The liability both of the operator of a nuclear installation and the carrier of nuclear substances does in principle not presuppose any negligence on their part. Accordingly the Act lays down as a rule the strict liability of the said persons. The operator of a nuclear installation is liable for all harm caused by operating the installation. Not only damages resulting from an accident during operation are covered, but also any damages in the ordinary course of operation (i.e. without any sudden incident). The carrier of nuclear substances is liable for damages caused by an accident during carriage. In addition he has to remedy any other harm caused during carriage (thus likewise independently of a possible incident).

The maximum liability amounts, which were provided for in the Act on Liability for Nuclear Damage of 1964, were eliminated by the Act on Liability for Damage Caused by Radioactivity of 1999. It designates in principle the unlimited liability of the person liable.

The Act also provides liability rules for the handling of radionuclides. Also in these cases the amount of compensation is in principle unlimited. The holder of the radionuclide, however, is liable only if he is to be blamed for negligence, since in these cases damage normally cannot reach dimensions comparable to those caused by nuclear installations or the substantially more dangerous nuclear material. Due to the yet given specific danger of radionuclides the burden of proof is shifted from the injured party to the holder of the radionuclide.

Furthermore, the Act abandons the principle of „channelling" of nuclear liability currently governing the international conventions on the subject-matter. That means that compensation cannot only be claimed from the operator of an installation, but the injured party can also take legal action against third parties, e.g. the supplier and the constructor. This is meant to make sure that the person injured can recover all damages even if it is more than the operator can pay.

To provide security for the claims of possible injured parties, the Act on Liability for Damage Caused by Radioactivity of 1999 obliges the following persons to effect liability insurances: the operator of a nuclear installation situated in Austria, the carrier of nuclear substances and the holder of a radionuclide with an activity of more than 370 Gigabecquerel. Minimum amounts insured shall guarantee that all foreseeable hazards can be covered.

Taking into consideration that Austria is a party neither to the Paris Convention nor to the Vienna Convention, § 23 of the Act contains special rules for international cases. Whereas pursuant to § 48 of the Austrian Act on Private International Law non-contractual damage claims are governed by the law of the state, in which the act causing the damage was committed, § 23 (1) of the Act on Liability for Damage Caused by Radioactivity of 1999 provides that the person injured by ionizing radiation can demand that Austrian law be applied to claims for damages which occurred in Austria. If vice versa the incident causing the harm has taken place in Austria and thus Austrian law is applicable, damages which occurred abroad

are only covered according to Austrian law as far as compensation is also provided for by the personal statute - usually the lex patriae - of the injured party.

Concerning the Paris and the Vienna Conventions on Liability for Nuclear Damage, Austria has mainly two concerns: First the maximum liability amounts seem to be insufficient; in contrast the Austrian Act on Liability for Damage Caused by Radioactivity of 1999 provides for unlimited liability combined with obligatory liability insurance covering relatively high amounts of damage. Secondly the channelling of liability according to which only operators and not also suppliers can be held liable seems inadequate.

General Safety considerations

Article 10 - 12

not applicable

Article 13 (Quality assurance)

Legal provisions for quality assurance are part of the licensing process (Article 5 to 7) and the periodic inspections by the licensing authority according to Article 17 of the Radiation Protection Act. (see Article 7.2)

Article 14 (Assessment and verification of safety)

According to Article 17 of the Radiation Protection Act, the licensing authorities regularly carry out inspections of the facilities, in order to control the compliance with respective laws and specific requirements from the granted license (see Article 7.2). The licensing authorities for the Austrian nuclear installations listed under Article are

- the Federal Ministry of Education, Science and Culture conjointly with the Federal Ministry of Agriculture, Forestry, Environment and Water Management for the Atomic Institute, Vienna and the Reactor Institute, Graz and
- the Federal Ministry of Agriculture, Forestry, Environment and Water Management for Nuclear Engineering Seibersdorf.

Reporting obligations regarding events in nuclear facilities are regulated by the Radiation Protection Ordinance, respectively by the international Convention on Early Notification of a Nuclear Accident (IAEA/Emercon) and the European Council Decision 87/600/Euratom (ECURIE). National authority to be reported to is the licensing authority.

Article 15 (Radiation Protection)

Article 15 is not applicable for Austria (as applied to nuclear installations as defined in Art. 2 of the Convention). Nevertheless the Austrian legislative framework concerning radiation protection in general is described in this report.

The main focus of Austria's nuclear safety legislation is radiation protection, which is governed by the Radiation Protection Act and the respective Radiation Protection Ordinances. These instruments define the general measures to protect the lives and health of individuals and their descendants from the hazards of ionising radiation, as well as the licensing conditions for the construction and operation of installations for the handling of radioactive materi-

als. Part III of the Radiation Protection Act and the Radiation Protection Ordinance contain the basic radiation protection provisions:

- to ensure that exposure of individuals to radiation is kept „as low as possible … in consideration of economic and social factors"; the term „ALARA" is not explicitly used, but serves as factual basis for radiation protection in Austria;
- to restrict the absorption of radioactive materials by the human body to a minimum;
- to ensure that only the smallest possible quantities of radioactive materials are released into the air, water or soil.

The recent amendment of the Radiation Protection Act in 2002 contained the implementation of the EU Council Directive 96/29/EURATOM (Basic Safety Standards) introducing, e.g.:

- Basic dose limits of 20 mSv/year for radiation workers and 1 mSv/year for members of the public,
- the current ICRU-measurement categories, conversion factors and calculation methods,
- explicit dose constraints,
- consideration of elevated exposure to natural radioactivity (NORM).

This amendment also implemented the EU Council Directive 97/43/EURATOM on the medical exposure, introduced e.g. the minimisation of exposure and quality assurance of medical installations.

The conditions and limits for radioactive materials release are covered by Articles 89 - 92 of the Radiation Protection Ordinance as well as by individual licensing decrees. Regarding environmental radiological surveillance, Article 93 of the Radiation Protection Ordinance obliges any operator of nuclear facilities or of equipment emitting ionising radiation to provide for an appropriate surveillance system and to measure radiation values in the environment regularly. In addition, the licensing authority is entitled to measure radiation in the vicinity of nuclear facilities or equipment emitting ionising radiation. In carrying out these control and inspection activities, the authority is supported by competent experts.

The Radiation Protection Act requires pre-employment medical examinations and periodic health checks of exposed workers as well as their dosimetric surveillance. The Act provides that special radiation protection provisions be defined in a specific Radiation Protection Ordinance.

The Radiation Protection Act as well as the Radiation Protection Ordinance are currently again in the process of being adapted to the recent requirements of the law of the European Union especially in the field of interventions and safeguards for radioactive substances.

Article 16 (Emergency Preparedness)

16.1. National emergency arrangements

Article 38 of the Radiation Protection Act sets forth the general principles concerning measures to be taken in the case of radioactive contamination.

In general, the competence for taking such measures lies within the Landeshauptmann, who is subject to orders from the federal level (Federal Minister in charge of radiation protection). The Federal Minister of Agriculture, Forestry, Environment and Water Management is responsible for general radiation protection aspects and the Federal Minister of Health and Women is competent for foodstuffs. Regarding radiological emergencies, a national contingency plan exists, containing in particular provisions on the exchange of information, civil

protection measures, alert and information of the general public and convening the „National Crisis and Disaster Protection Management". Together with appropriate general recommendations issued by the federal authorities, this principal plan serves as the basis for preparatory measures to be taken at the regional level. A classification system for nuclear or radiation accidents is laid down in the Framework Recommendations of the Austrian Radiation Protection Committee.

The Federal Alarm Centre (Bundeswarnzentrale) of the Federal Ministry of the Interior acts as a contact point and „message relay centre" for the Radiation Protection Division of the Federal Ministry of Agriculture, Forestry, Environment and Water Management, whose experts are available round the clock. If an incident is reported to the Federal Alarm Centre, the radiation protection experts are immediately called in. If they come to the conclusion that there is imminent danger, all competent authorities are informed.

The Federal Ministry of Agriculture, Forestry, Environment and Water Management may decide on any urgent preliminary countermeasures. If necessary, the National Crisis and Disaster Protection Management (Koordinationsausschuss des Staatlichen Krisen- und Katastrophenschutzmanagements) will convene. Its membership comprises all Federal Ministries, the regional governments and socio-professional interest groups as well as the Austrian radio and television network (ORF) and the Austrian Press Agency. This team of experts advises the Federal Government: it co-ordinates all measures necessary for an emergency response in the short-term phase und makes arrangements for a long-term concerted strategy at all levels of the public administration.

Depending on the actual situation after an accident and based on the classification scheme, the competent authority gives order resp. recommendations to the provincial governors who are responsible for the implementation of most of the countermeasures. The basic features are compiled in a „Rahmenplan für Maßnahmen zum Schutz der Bevölkerung bei Unfällen in Kernkraftwerken" (national contingency plan regarding measures to protect the public in case of NPP accidents), which is continually updated.

At present, the emergency plans and planned countermeasures in Austria are developed upon generic source terms estimates for the NPPs in vicinity. As generic source terms are typically depicting the maximum releases, Austria believes that a provision for other realistic source terms, coupled with probabilities estimates of specific categories of releases (i.e. as found in a modern, full scope, state of the art level 2 PSA) could be used for a more realistic planning for emergency actions. Austria would encourage neighbouring countries to provide that information and thus help in joint planning for emergency intervention and activities.

In case of an accident affecting the Austrian population prepared texts will be forwarded by the authorities to the Austrian Broadcast Corp. and the Austrian Press Agency, giving recommendations to the public. In advance, TV spots have been recorded, that can be used on such occasions. Printed guides for in advance information of the public are available free of cost (also available on the internet).

Potassium iodide prophylaxis with systematic nation wide storage of the drugs was implemented in 1990 on the basis of the guidelines of the World Health Organisation.

Basic and advanced knowledge and training possibilities are available in Austria's existing nuclear research facilities in operation. They are regularly used to maintain and improve the qualification of the experts in nuclear emergency. In addition, participation in international workshops and seminars on nuclear reactor safety aspects and routine bilateral contacts with neighbouring countries operating nuclear power plants help keeping the basic know-how in

this field up-to-date. Several experts are participating in respective EU working groups and IAEA technical committees.

Several types of exercises help to improve the emergency preparedness facilities and keep the emergency personnel trained:

- On the international scale Austria periodically takes part in the exercises coordinated by the IAEA under the Convention on Early Notification of a Nuclear Accident and in exercises within the ECURIE („European Community Urgent Radiological Information Exchange") system of the European Union.
- Also on an international scale Austria took part in the INEX exercise series; participation in future exercises of this type is planned. Austria additionally participates in the DSSNET („Decision Support System NETwork") exercises that mainly help to improve and maintain technical decision support means. In this context, Austria will be user of the RODOS-System („Real time Online DecisiOn Support"), developed within the European Union research framework.
- On a bilateral scale approximately annually exercises are conducted, together with a country operating a NPP in the vicinity of Austria. These exercises generally involve parts of the federal and provincial emergency management structures, as well as local authorities in both countries.
- Local exercises on provincial level regarding the implementation of special tasks in a nuclear emergency (such as decontamination, sampling) are conducted on an irregular basis.

16.2. The Austrian Radiation Early Warning and Monitoring System

A special chapter of the Austrian Radiation Protection Act deals with large-scale radiation surveillance, monitoring in emergency situations and the implementation of remedial countermeasures.

As a result of this Act, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) operates an automatic Radiation Early Warning System. A laboratory-based monitoring network is operated by the BMLFUW and of the Ministry of Health and Women in order to comply with the requirements of rapid recognition and precise determination of radioactive contaminants; it performs mainly the radionuclide-specific monitoring of the air, precipitation, the surface water bodies and foodstuffs.

Additional measuring data may be obtained by car-borne and air-borne dose rate measurement units which are installed in the Federal Ministry of the Interior's und the Federal Army's networks. Furthermore, the BMLFUW plays an important role as the authority competent for the planning and implementation of countermeasures.

The Austrian Radiation Early Warning System (Strahlenfrühwarnsystem) continuously monitors external gamma dose rates with 336 measuring stations throughout the country. In addition, about 10 aerosol monitoring stations have been installed near the Austrian borders. This automatic on-line system is operated by the BMLFUW (Department Radiation Protection), supported to a large extent by contractors. Its construction started in the mid-Seventies; and it has been operative since 1979. A major technical upgrade of the system providing state-of-the-art data handling and visualisation was started in the year 2001 and is nearly finished.

Measuring data of the system are transmitted on-line to the National Centre as well as to 9 Regional Centres located in the region's capitals. Consequently radiation can be monitored on the whole federal territory of Austria. The system design meets the requirements of high operational safety and reliability. The general public has permanent access to the data via the ORF-Teletext service.

The data gathered by the Radiation Early Warning and Monitoring System are exchanged on-line with the corresponding systems in the neighbouring countries of Slovenia, Slovakia, the Czech Republic and Hungary on the basis of bilateral agreements. It is intended to setup a similar data exchange with the other neighbouring states.

For an actual list of Austria's bilateral information agreements with neighbouring states see Annex 1.

Safety of installations

Article 17 - 19

not applicable

ACTIVITIES, ACHIEVEMENTS AND CONCERNS REGARDING THE IMPROVEMENT OF SAFETY

Major achievements and changes since CNS Review Conference 2002

The major change since the CNS Review Conference 2002 is the amendment of the Radiation Protection Act by the Radiation Protection-EU-Adaptation Act in 2002. The main goal of the amendment was the completion of the transformation of the EU-directives 96/29/EURATOM, 97/43/EURATOM and 90/641/EURATOM into national law as well as to fulfil the obligations under the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

ANNEXES

Annex 1: Bilateral agreements in the field of nuclear safety and radiation protection

Annex 2: Multilateral agreements in the field of nuclear safety and radiation protection

Annex 1:

Bilateral Agreements in the Field of Nuclear Safety and Radiation Protection

Belarus

Agreement on an exchange of information in the field of nuclear safety and radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Republik Belarus über den Austausch von Informationen aus dem Bereich der nuklearen Sicherheit und des Strahlenschutzes).
Signed on 9 June 2000.

Czech Republic

Agreement between Austria and former Czechoslovakia concerning questions of mutual interest in connection with nuclear safety and radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Tschechoslowakischen Sozialistischen Republik zur Regelung von Fragen gemeinsamen Interesses im Zusammenhang mit der nuklearen Sicherheit und dem Strahlenschutz)
BGBl. No. 565/1990 idF BGBl. III No. 123/1997, entered into force in 1990.

Germany

Agreement on an exchange of information and experience in the field of radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Bundesrepublik Deutschland über Informations- und Erfahrungsaustausch auf dem Gebiet des Strahlenschutzes)
BGBl. No. 128/1989 idF BGBl. No. 892/1994, entered into force in 1994.

Agreement on mutual assistance in the event of disasters or serious accidents

(Abkommen zwischen der Republik Österreich und der Bundesrepublik Deutschland über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)
BGBl. No. 489/1992, entered into force in 1992.

Hungary

Agreement on the settlement of questions of mutual interest in connection with nuclear installations

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Ungarischen Volksrepublik zur Regelung von Fragen gemeinsamen Interesses im Zusammenhang mit kerntechnischen Anlagen)
BGBl. No. 454/1987, entered into force in 1987.

Agreement on mutual assistance in the event of disasters or serious accidents

(Abkommen zwischen der Republik Österreich und der Republik Ungarn über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)
BGBl. III No. 76/1998, entered into force in 1998.

Liechtenstein

Agreement on mutual assistance in the event of disasters or serious accidents
(Abkommen zwischen der Republik Österreich und dem Fürstentum Liechtenstein über die gegenseitige Hilfeleistung bei Katastrophen oder schweren Unglücks fällen)
BGBl. No. 758/1995, entered into force in 1996.

Poland

Agreement on an exchange of information and co-operation in the field of nuclear safety and radiation protection
(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Republik Polen über Informationsaustausch und Zusammenarbeit auf dem Gebiet der nuklearen Sicherheit und des Strahlenschutzes)
BGBl. No. 643/1990, entered into force in 1990.

Russia

Agreement between Austria and the former USSR concerning early notification and information in the case of nuclear accidents and the exchange of information related to nuclear installations
(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Union der Sozialistischen Sowjetrepubliken über die frühzeitige Benachrichtigung bei einem nuklearen Unfall und den Informationsaustausch über Kernanlagen)
BGBl. No. 130/1990 idF BGBl. No. 257/1994, entered into force in 1990.

Slovakia

Agreement between Austria and Slovakia concerning questions of mutual interest in connection with nuclear safety and radiation protection
(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Slowakischen Republik zur Regelung von Fragen gemeinsamen Interesses im Zusammenhang mit der nuklearen Sicherheit und dem Strahlenschutz)
BGBl. No. 565/1990 idF BGBl. No. 1046/1994, entered into force in 1995.

Agreement on co-operation and mutual assistance in the event of disasters
(Vertrag zwischen der Republik Österreich und der Slowakischen Republik über die Zusammenarbeit und die gegenseitige Hilfeleistung bei Katastrophen)
BGBl. III No. 155/98, entered into force in 1998.

Slovenia

Agreement on an early exchange of information in the case of radiological dangers and on questions of mutual interest in the field of nuclear safety and radiation protection
(Abkommen zwischen der Republik Österreich und der Republik Slowenien über den frühzeitigen Austausch von Informationen bei radiologischen Gefahren und über Fragen gemeinsamen Interesses aus dem Bereich der nuklearen Sicherheit und des Strahlenschutzes)
BGBl. III No. 176/1998, entered into force in 1998.

Agreement on co-operation in the field of prevention and mutual assistance in the event of disasters or serious accidents
(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Republik Slowenien über die Zusammenarbeit bei der Vorbeugung und gegenseitigen Hilfeleistung bei Katastrophen oder schweren Unglücksfällen)
BGBl. III No. 87/1998, entered into force in 1998.

Switzerland

Agreement on an exchange of information in the field of nuclear safety and radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und dem Schweizerischen Bundesrat über den frühzeitigen Austausch von Informationen aus dem Bereich der nuklearen Sicherheit und des Strahlenschutzes)

BGBl. III No. 201/2000, entered into force in 2001.

Tajikistan

Agreement between Austria and the former USSR concerning early notification and information in the case of nuclear accidents and exchange of information related to nuclear installations (used with Tajikistan)

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Union der Sozialistischen Sowjetrepubliken über die frühzeitige Benachrichtigung bei einem nuklearen Unfall und den Informationsaustausch über Kernanlagen)

BGBl. No. 130/1990 and BGBl. III No. 4/1998, entered into force in 1998.

Ukraine

Agreement on an exchange of information and co-operation in the field of nuclear safety and radiation protection

(Abkommen zwischen der Regierung der Republik Österreich und der Regierung der Ukraine über Informationsaustausch und Zusammenarbeit auf dem Gebiet der nuklearen Sicherheit und des Strahlenschutzes)

BGBl. III No. 152/1998, entered into force in 1998.

Annex 2

Multilateral Agreements in the Field of Nuclear Safety and Radiation Protection

UN / IAEA

Convention on Early Notification of a Nuclear Accident
(Übereinkommen über die frühzeitige Benachrichtigung bei nuklearen Unfällen)
BGBl. No. 186/1988, entered into force in 1988

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
(Übereinkommen über Hilfeleistung bei nuklearen Unfällen oder strahlungsbedingten Notfällen)
BGBl. No. 87/1990, entered into force in 1989.

Convention on Nuclear Safety
(Übereinkommen über nukleare Sicherheit)
BGBl. III No. 39/1998, entered into force in 1997

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management
(Gemeinsames Übereinkommen über die Sicherheit der Behandlung abgebrannter Brennstäbe und die Sicherheit der Behandlung radioaktiver Abfälle)
BGBl. III No. 169/2001, entered into force in 2001.

UN / ECE

Convention on Environmental Impact Assessment in a Transboundary Context
(Übereinkommen über die Umweltverträglichkeitsprüfung im grenzüberschreitenden Rahmen)
BGBl. III No. 201/1997, entered into force in 1997.

Convention on the Transboundary Effects of Industrial Accidents
(Übereinkommen über die grenzüberschreitenden Auswirkungen von Industrieunfällen)
BGBl. III No. 119/2000, entered into force in 2000.

Convention on the Protection and Use of Transboundary Watercourses and International Lakes
(Übereinkommen zum Schutz und zur Nutzung grenzüberschreitender Wasserläufe und internationaler Seen)
BGBl. No. 578/1996, entered into force in 1996.

Council of Europe

European Outline Convention on Transfrontier Co-operation between Territorial Communities or Authorities
(Europäisches Rahmenübereinkommen über die grenzüberschreitende Zusammenarbeit zwischen Gebietskörperschaften)
BGBl. No. 52/1983, entered into force in 1983.

Danube River Protection Convention

Convention on Co-operation for the Protection and Sustainable Use of the Danube River
(Übereinkommen über die Zusammenarbeit zum Schutz und zur verträglichen Nutzung der Donau)
BGBl. III No. 139/1998, entered into force in 1998.